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November 6, 2009

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The Honorable Steven Chu
Secretary
Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Chu:

I write to inquire how the recent announcement from the Nuclear Regulatory Commission (NRC) regarding the failure of the AP1000 nuclear reactor design to demonstrate compliance with regulatory safety requirements will impact the loan guarantee applications currently under consideration by the Department of Energy that are based on reactor designs that have not yet been finalized or approved by the NRC.

As you know, several of the 21 proposed nuclear units that have submitted applications for the \$18.5 billion in available loan guarantees are based on the AP1000 design, including two of the four applications widely reported to be the leading candidates for these awards. The NRC revealed on October 15, 2009, that it considers its review of the shield building component of the AP1000 reactor design, as proposed by Westinghouse Electric Company, to be complete and that the proposed design requires either additional analysis, testing or actual design modifications to ensure compliance with NRC requirements and performance of required safety functions. On October 14, 2009—the day before the NRC announcement—you were quoted in a Bloomberg article saying that you expected the \$18.5 billion in loan guarantees for new nuclear power plants to be announced “very soon.”

The power plant shield building design is critical to ensuring that the nuclear reactor can withstand hurricanes, earthquakes, tornadoes and the impact of a commercial airliner, as required by NRC regulation. The seriousness of the design flaw is

underscored by the fact that NRC staff had been working with the reactor manufacturer on this problem for a year before their decision was made public last month.

Building safe reactors on time and on budget has long been a challenge for the nuclear power industry. According to the Congressional Budget Office, of the more than 40 nuclear power projects under way since the partial core meltdown at Three Mile Island in 1979, construction cost overruns exceeded 250 percent. An average of 12 years elapsed between the start of construction and commercial operation. Since the last reactor came online in the United States in 1996, the nuclear industry and the number of skilled nuclear workers has further contracted, especially domestically. This raises the potential for massive construction delays and cost overruns—and defaults on taxpayer-backed loans, which is why private sector capital has not been willing to finance new nuclear plants without 100 percent government debt guarantees.

The nuclear plant currently under construction in Olkiluoto, Finland was initially intended to demonstrate how many of nuclear power's problems had been overcome. This plant, using the Evolutionary Power Reactor (EPR) produced by the French state-controlled company Areva, was supposed to be finished this past summer but instead is now more than 50 percent over budget and its commissioning utility has said it will not meet the revised completion schedule of mid-2012.

Earlier this week, nuclear regulators from France, Finland, and the U.K. issued a joint statement raising questions about the safety of the EPR. This is the same design that is still under review at the NRC, and is one of the final candidates widely reported to be on the Department of Energy's short list for a loan guarantee. The issues highlighted by the French, Finnish, and U.K. regulators focus on the adequacy of the safety systems used to maintain control of the reactor if it goes outside normal conditions as well as the independence of these safety systems from the control systems used to operate the plant under normal conditions. Areva has subsequently announced that their EPR design may need "adaptations."

The new Combined Construction and Operating License (COL) process at the NRC effectively reduces the regulatory permitting process for these long term, capital-intensive, high-risk nuclear projects to a single step. I believe it is critical that this important step be completed before the Department offers a loan guarantee for a new nuclear power plant. Otherwise valuable taxpayer support would be set aside for a project that may not pass regulatory review.

Good government practices demand high standards of safety and avoidance of waste. When a new drug treatment is proposed or a new car manufactured, the safety of these products must be ensured before they hit the marketplace. And when tax dollars are on the line supporting important projects, citizens should know they are getting the best deal possible for their money. These principles of safety and fiscal responsibility are especially applicable to new nuclear power plants. Withholding loan guarantee commitments until a project obtains regulatory approval ensures that taxpayers do not assume the financial risk of new reactor construction unless the loan guarantee applicants

have demonstrated with certainty that their reactor designs are safe, effective, and meet applicable NRC regulations.

In order to better understand what actions the Department is taking to ensure that the taxpayer's interests are properly protected in connection with any nuclear loan guarantees, the Subcommittee would appreciate your assistance and cooperation in providing responses to the following questions:

1. How is the Department proceeding with loan guarantees—conditional or otherwise—for projects in which equipment designs are not yet finalized or approved, such as the AP1000 applications? Will the Department commit to not approving loan guarantees for reactors whose designs have not yet been finalized or approved by the NRC? If not, why not?

2. Will conditional guarantees have a firm sunset clause if conditions are not met within a limited time period? If not, why not?

3. The 2005 Energy Act that authorized the Loan Guarantee Program specified that the Secretary must consider the financial risk and likelihood of repayment associated with a project in order to award a guarantee.

a. How are your risk assessments of the AP1000 reactor loan guarantee applications affected by the recent NRC actions? If they are not affected, why not?

b. Are you concerned about additional risks to the taxpayer as a result of the design flaws of the AP1000 identified by the NRC and potential problems with other yet unapproved designs? If not, why not?

c. How are these concerns being addressed in the loan guarantee selection process for new nuclear plants?


d. Will loan guarantee applicants be required to pay the subsidy cost at the time of the conditional award? Will the Department be reassessing the subsidy cost over the life of the conditional award? If not, why not?

4. As part of its general project evaluation and due diligence process, how is the Department's loan guarantee office coordinating with relevant regulatory agencies to ensure that taxpayer-backed loan guarantees are supplied to projects that meet health, safety, environmental, and other requirements? More specifically, how is the Department coordinating with the NRC on the nuclear loan guarantees to ensure that the Department is receiving the most up-to-date information about design certification and project licensing?

- 5.) Do the recent statements of nuclear regulators in France, Finland, and the U.K. regarding the EPR suggest that providing loan guarantees for this reactor may pose a greater risk than previously anticipated? Is the Department coordinating with the NRC to understand whether these concerns are shared by the NRC, and if so, whether it is advisable to provide loan guarantees for these reactors prior to those concerns being fully resolved?
6. When does the Department anticipate offering the \$18.5 billion in conditional loan guarantee commitments for new nuclear reactors?

Thank you very much for your consideration of this important matter. Please provide responses no later than Tuesday, December 1, 2009. If you have additional questions or concerns, please contact Michael Goo or Jonathan Phillips on my staff at 202-225-4012.

Sincerely,


Edward J. Markey
Chairman